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ABSTRACT

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This invention relates to methods and compositions for materials having a non-leaching coating that has antimicrobial properties. The coating is applied to substrates such as gauze-type wound dressings, powders and other substrates. Covalent, non-leaching, non-hydrolyzable bonds are formed between the substrate and the polymer molecules that form the coating. A high concentration of anti-microbial groups on multi-length polymer chains and relatively long average chain lengths, contribute to an absorbent or superabsorbent surface with a high level antimicrobial efficacy. Utilization of non-leaching coatings having a plurality of anionic or cationic sites is used according to this invention to bind a plurality of oppositely charged biologically or chemically active compounds, and to release the bound oppositely charged biologically or chemically active compounds from said substrate over a period of time to achieve desired objectives as diverse as improved wound healing to reduction in body odor.